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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,056	12/31/2001	Amnon Silverstein	10010658	1798

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HEWLETT-PACKARD COMPANY  
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EXAMINER

RAHMJOO, MANUCHER

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 12/31/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/040,056	SILVERSTEIN, AMNON
	Examiner Mike Rahmjoo	Art Unit 2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11 December 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Szeliski et al US Patent 6,009,190, hereinafter, Szeliski.

As per claims 1,10 and 16 Szeliski teaches accessing said image, said image sampled at a higher spatial resolution than the spatial resolution of said display see for example figures 2- 7 column 13 lines 27- 31; and mapping an area of a display to a region of said image, said area operable to display (see for example column 9 lines 30- 35) a first color of a plurality of colors see for example column 28 lines 39- 44;and based on intensity of said first color in said region of said image, calculating an intensity value (color or intensity) for said first color to be displayed in said area of said display, wherein said region comprises an intensity value for each of said plurality of colors see for example column 29 lines 54- 67; and repeating a) - b) for additional areas of said

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display corresponding to additional regions of said image, mapping each area to its own region, wherein said image is processed see for example column 29 lines 1- 3 and 54- 62 and figure 31 (through repeating the steps for each triangle); and rendering said image on said display, based on said calculated intensities see for example column 27 lines 62- 67 and column 28 lines 1- 8.

As per claim 2 Szeliski teaches d) displaying said processed image on said display, said display providing for control over individual sub-pixels, wherein each area of said display corresponds to a sub-pixel operable to display a color see for example column 9 lines 21- 35.

As per claim 3 Szeliski teaches b1) averaging the intensity value of said first color over a plurality of regions neighboring said region of said image, wherein each of said areas maps to its own plurality of regions see for example column 30 lines 20- 21.

As per claims 4 and 7 Szeliski teaches b1) based on the intensity of said first color in said plurality of regions of said image, calculating an intensity value for said first color see for example column 29 lines 54- 67;  
b2) calculating an error for said first color see for example column 11 lines 44- 56; and  
b3) propagating said error for said first color for processing further regions of said image see for example column 32 lines 40- 42.

As per claim 5 Szeliski teaches b1) an error that was propagated when processing another area for said first color see for example column 12 lines 48- 50.

As per claim 6 Szeliski teaches b1) based on the intensity of said first color in said region of said image, calculating an uncompensated intensity value for said first

color(computation of intensity through triangles with id tags) see for example column 29 lines 57- 67 and figure 31;

b2) calculating an error for each of the rest of said plurality of colors within said region see for example column 11 lines 44- 56,

b3) storing said errors (registration of errors) for said rest of said colors for processing further regions of said image see for example column 32 lines 43- 45; and

b4) calculating a compensated intensity value for said area(compensation through de-ghosting; a method for improving quality of image mosaics see for example column 32 line 37), based on said uncompensated intensity value and errors which were calculated for said first color when processing other image regions see for example column 32 lines 54- 58.

As per claim 8 Szeliski teaches filtering said image to prior to calculating the intensity value for said first color to be displayed, thereby producing a filtered image having a similar color scheme as said display see for example column 29 lines 18- 20.

As per claim 9 Szeliski teaches said output display has sub- pixel control see for example column 9 lines 21- 35.

As per Claims 11- 15 and 17- 23, these claims are similar in scope to claims 1- 9 and rejected under the same rational.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure; US 2003/0128223, US 2002/0122019, 5,278,949, and 6,384,839.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Response to Arguments***

Applicant's arguments filed 12/11/2003 have been fully considered but they are not persuasive.

Applicant argues on page 10 line 3 of his remarks that the reference made of the record does not teach the concept of the area being operable to display a first color of a plurality of colors.

The examiner is broadly interpreting a first color as any color within a panoramic image. The displaying of the area of a first color of a plurality of colors is taught through the displaying of the panoramic images through a display device or medium.

Applicant further argues on page 10 line 28- 30 through page 11 line 1 of his remarks that the passage cited in the reference made of the record does not discuss calculating an intensity value for the first color (such as red) to be displayed in the area of the display based intensity of the first color (such as red) in the region of the image as required by the b) limitation of claim 1.

The examiner cannot make a clear sense between basing intensity of the first color in said region of said image and calculating an intensity value for the same first color. If the intensity, which is the basis of the first color in said region of the image, has

been initially recognized and is a known value then why would you have to proceed with calculating the intensity of the same color in said region of said image again.

**Inquiry**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is (703) 305-5658. The examiner can normally be reached on 6:30- 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (703) 308- 6829. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872- 9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Mike Rahmjoo

December 22, 2003



MATTHEW C. BELLA  
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